

Please replace the paragraph at page 10, lines 25-33, with the following text:

Figure 2 shows diagrammatically a line for production of rigid void-free composite sheets according to a second embodiment of the invention. As in the preceding embodiment, a creel 10, on which a multiplicity of windings of commingled threads 11 is placed, is fitted at the beginning of the line. These threads also feed a cutter 12. The threads chopped by this means are collected and transferred by a conveyor belt 42 to the top of a hopper 43 placed above a moving conveyor 19.

(Please replace the paragraph at page 11, lines 28-30, with the following text.)

Figure 3 shows diagrammatically a line for production of rigid void-free composite sheets according to a third embodiment of the invention.

IN THE CLAIMS

A clean copy of the claims incorporating any amendment is shown below.

Please amend Claims 1, 8, 9, 10, 13 and 14 as follows:

1. (Seven Times Amended) A process for continuously manufacturing a rigid void-free composite product, comprising the steps of:

 preparing intimately blended commingled threads containing glass filaments and filaments of thermoplastic organic material;

 providing a strip of fabric made from the intimately blended commingled threads and a plurality of continuous threads including at least 80% by weight of the intimately blended commingled threads;

continuously depositing onto a moving conveyor two layers, one of the two layers including said plurality of continuous threads in a form of at least one of continuous threads continuously deposited in a direction of movement of said moving conveyor, continuous threads continuously deposited in a form of superposed loops and continuous threads continuously deposited in a form of chopped threads, and the other one of the two layers including said strip of fabric;

continuously transferring said two layers combined through a plurality of zones where said two layers are heated and cooled while being sufficiently compressed to form a continuous rigid void-free composite material capable of being molded; and

at least one of cutting up said rigid void-free continuous composite material into a plurality of sheets and winding said continuous rigid void-free composite material onto a rotating drum,

wherein said glass filaments deposited in said process in total comprise more than 40 % by weight of said glass filaments and said filaments of thermoplastic organic material deposited in said process.

8. (Five Times Amended) A process according to Claim 7, wherein:

said one of the two layers is continuously deposited on said moving conveyor and is formed of said chopped threads;

said other one of the two layers is continuously deposited on said one of the two layers and is formed exclusively by said intimately blended commingled threads;

a third layer of chopped intimately blended commingled threads of glass filaments and filaments of a thermoplastic organic material is continuously deposited onto said other one of the two layers;

a combination of said two layers and said third layer thus formed is continuously transferred into a first zone where said combination is heated and then into a second zone where said combination is sufficiently compressed and heated to become rigid and void-free; said combination is then continuously transferred into a third zone where said combination is sufficiently compressed and cooled to become rigid and void-free, thereby forming a continuous rigid void-free composite material capable of being molded; and said continuous rigid void-free composite material is cut up at an exit of the third zone.

9. (Five Times Amended) A process according to Claim 7, wherein:

said other one of the two layers is continuously deposited on said moving conveyor and is formed exclusively of said intimately blended commingled threads; said one of the two layers is continuously deposited on said other one of the two layers and is formed of said chopped threads;

a third layer exclusively formed by intimately blended commingled threads of glass filaments and filaments of a thermoplastic organic material is continuously deposited onto said one of the two layers;

a fourth layer of chopped intimately blended commingled threads of glass filaments and filaments of a thermoplastic organic material is continuously deposited onto said third layer;

a combination of said two layers, said third layer and said fourth layer thus formed is continuously transferred into a first zone where said combination is heated, and then into a second zone where said combination is sufficiently compressed and heated to become rigid and void-free;

said combination is continuously transferred into a third zone where said combination is sufficiently compressed and cooled to become rigid and void-free, thereby forming a continuous rigid void-free composite material capable of being molded; and

the continuous rigid void-free composite material is cut up at an exit of the third zone.

10. (Five Times Amended) A process according to Claim 7, wherein:

said other one of the two layers is continuously deposited onto said moving conveyor and is formed exclusively by said intimately blended commingled threads;

said one of the two layers is continuously deposited on said other one of the two layers;

a third layer formed exclusively by commingled threads of glass filaments and filaments of a thermoplastic organic material is continuously deposited onto said one of the two layers,

a fourth layer is continuously deposited on said third layer, said fourth layer being formed of commingled threads of glass filaments and filaments of a thermoplastic organic material;

a combination of said two layers, said third layer and said fourth layer thus formed is continuously transferred into a first zone where said combination is heated, and then into a second zone where said combination is sufficiently compressed and heated to become rigid and void-free;

said combination is continuously transferred into a third zone where said combination is sufficiently compressed and cooled to become rigid and void-free, thereby forming a continuous rigid void-free composite material capable of being molded; and

the continuous rigid void-free composite material is cut up at an exit of the third zone.

13. (Five Times Amended) A device for manufacturing a rigid void-free composite product, comprising:

a storage device for a plurality of windings of commingled threads containing glass filaments and filaments of a thermoplastic organic material;

a cutter fed with a plurality of continuous threads extracted from said windings;

at least one device positioned and configured to transfer, store, and distribute said commingled threads chopped by said cutter in a form of a sheet;

at least one barrel supporting at least two rolls of fabric made of said commingled threads;

a conveyor positioned and configured to receive said commingled threads thus chopped and a strip of said fabric;

a preheating oven placed at an end portion of the conveyor;

a twin-belt press including a plurality of heating drums in an upstream portion of said twin-belt press and a plurality of cooled rollers in a downstream portion and a central portion of said twin-belt press, said heating drums being configured to sufficiently heat and compress said commingled threads chopped and said strip of fabric to become rigid and void-free, and said cooled rollers being configured to sufficiently cool and compress said commingled threads chopped and said strip of fabric to become rigid and void-free, thereby forming a rigid void-free composite material capable of being molded; and

an automatic guillotine device positioned and configured to cut the rigid void-free composite product,

wherein said glass filaments deposited in said process in total comprise more than 40 % by weight of said glass filaments and said filaments of thermoplastic organic material deposited in said process.

14. (Five Times Amended) A device for manufacturing a rigid void-free composite product, comprising:

a storage device for a plurality of windings of commingled threads containing glass filaments and filaments of a thermoplastic organic material;

a conveyor positioned and configured to receive the commingled threads deposited in a form of at least one of strips of fabric, continuous threads and chopped threads;

a first barrel disposed upstream of said conveyor and supporting at least two rolls of fabric made of said commingled threads;

at least one distribution device configured to distribute said commingled threads in a form of continuous threads, said at least one distribution device being disposed above said conveyor;

a second barrel disposed downstream of said conveyor and supporting at least two rolls of fabric made of said commingled threads;

at least one of a second distribution device configured to distribute said continuous thread and a cutter followed by a third distribution device configured to distribute said continuous threads chopped by said cutter;

a preheating oven placed at an end portion of the conveyor; and

a twin-belt press including a plurality of heating drums in an upstream portion of said twin-belt press and a plurality of cooled rolls in a downstream portion and a central portion of said twin-belt press, said heating drums being configured to sufficiently heat and compress said commingled threads deposited onto said conveyor to become rigid and void-free, and said cooled rollers being configured to sufficiently cool and compress said commingled threads deposited onto said conveyor to become rigid and void-free, thereby forming a rigid void-free composite material capable of being molded; and